

Supplementary Material

Supplementary Table 1. Overview of crystallization screening hits of DC25 Fab fragment in complex with tau peptide 341-370, phosphorylated at S356 (SEKLDKDRVQSKIGpSLDNITHVPGGGNKK)

Fab (mg/ml)	Peptide (mg/ml)	Precipitant	Buffer	Salt	Crystal appearance	Screen
5, 10	0.56, 1.12	20% w/v PEG 8K	0.1 M sodium cacodylate pH 6.5	0.2 M magnesium acetate	2D*	Structure Screen I #15
5, 10	0.56, 1.12	30% w/v PEG 4K	0.1 M tri-sodium citrate pH 5.6	-	1D	Structure Screen I #7
5, 10	0.56, 1.12	20% w/v PEG 4K 20% v/v 2-propanol	0.1 M tri-sodium citrate pH 5.6	-	1D	Structure Screen I #9
5, 10	0.56, 1.12	30% w/v PEG 8K	0.1 M sodium cacodylate pH 6.5	0.2 M ammonium sulfate	1D	Structure Screen I #14
5, 10	0.56, 1.12	18% w/v PEG 8K	0.1 M sodium cacodylate pH 6.5	0.2 M calcium acetate	1D	Structure Screen I #20
10	1.12	25% w/v PEG 3.350	0.1 M HEPES pH 7.5	0.2 M ammonium acetate	3D	Index Screen #80
10	1.12	25% w/v PEG 3.350	0.1 M Tris pH 8.5	0.2 M ammonium acetate	3D	Index Screen #81
10	1.12	25% w/v PEG 3.350	0.1 M BIS-TRIS pH 5.5	0.2 M magnesium chloride hexahydrate	3D	Index Screen #82
10	1.12	25% w/v PEG 3.350	0.1 M BIS-TRIS pH 6.5	0.2 M magnesium chloride hexahydrate	3D	Index Screen #83
10	1.12	25% w/v PEG 3.350	0.1 M HEPES pH 7.5	0.2 M magnesium chloride Hexahydrate	3D	Index Screen #84
10	1.12	25% w/v PEG 3.350	0.1 M Tris pH 8.5	0.2 M magnesium chloride hexahydrate	3D	Index Screen #85
10	1.12	20% w/v PEG 3.350	-	0.2 M sodium formate	3D	Index Screen #90
10	1.12	20% w/v PEG 3.350	-	0.2 M potassium sodium tartrate tetrahydrate	1D	Index Screen #86
10	1.12	20% w/v PEG 3.350	-	0.2 M sodium malonate pH 7.0	1D	Index Screen #87
10	1.12	20% w/v PEG 3.350	-	0.2 M ammonium citrate tribasic pH 7.0	1D	Index Screen #88
10	1.12	20% w/v PEG 3.350	-	0.15 M DL-Malic acid pH 7.0	1D	Index Screen #91
10	1.12	15% w/v PEG 3.350	-	0.1 M magnesium formate dihydrate	1D	Index Screen #92
10	1.12	20% w/v PEG 3.350	-	0.2 M sodium citrate tribasic dihydrate	1D	Index Screen #94
10**	1.12	25% w/v PEG 2K MME	0.1 M sodium acetate pH 5.5	0.2 M calcium acetate	3D	Clear strategy II HT-96 A5
10**	1.12	25% w/v PEG 2K MME	0.1 M sodium cacodylate pH 6.5	0.2 M calcium acetate	3D	Clear strategy II HT-96 C5
10**	1.12	25% w/v PEG 2K MME	0.1 M Tris pH 7.5	0.2 M calcium acetate	3D	Clear strategy II HT-96 E5
10**	1.12	20% w/v PEG 4K	0.1 M sodium cacodylate pH 6.5	0.005 M cadmium chloride	3D	Clear strategy II HT-96 D3
10**	1.12	20% w/v PEG 4K	0.1 M Tris pH 7.5	0.005 M cadmium chloride	3D	Clear strategy II HT-96 F3
10**	1.12	40% v/v 1,4-butanediol	0.1 M Tris pH 8.5	0.005 M cadmium chloride	3D	Clear strategy II HT-96 H2
10**	1.12	20% w/v PEG 4K	0.1 M Tris pH 8.5	0.005 M cadmium chloride	3D	Clear strategy II HT-96 H3
10	1.12	20% w/v PEG 3.350	-	0.2M sodium fluoride pH 4.3	3D inorganic crystals	PEG/Ion Screen #1
10	1.12	20% w/v PEG 3.350	-	0.2 M ammonium fluoride pH 6.2	3D inorganic crystals	PEG/Ion Screen #3
10	1.12	20% w/v PEG 3.350	-	0.2 M magnesium formate dihydrate pH 7.0	3D	PEG/Ion Screen #20
10	1.12	20% w/v PEG 3.350	-	0.2 M potassium formate pH 7.3	1D	PEG/Ion Screen #22
10	1.12	20% w/v PEG 3.350	-	0.2 M ammonium formate pH 6.6	1D	PEG/Ion Screen #23
10	1.12	20% w/v PEG 3.350	-	0.2 M magnesium acetate tetrahydrate pH 7.9	3D	PEG/Ion Screen #25
10	1.12	20% w/v PEG 3.350	-	0.2 M sodium acetate trihydrate pH 8.0	3D	PEG/Ion Screen #27
10	1.12	20% w/v PEG 3.350	-	0.2 M calcium acetate hydrate pH 7.5	3D	PEG/Ion Screen #28
10	1.12	20% w/v PEG 3.350	-	0.2 M potassium acetate pH 8.1	1D	PEG/Ion Screen #29
10	1.12	20% w/v PEG 3.350	-	0.2 M potassium phosphate dibasic pH 9.2	3D	PEG/Ion Screen #42

* 1D – one dimensional crystals (thin sticks), 2D – two dimensional crystals (thin plates), 3D – three dimensional crystals (e.g. rods).

** Screening performed in 250-500 nl sitting drops in 96 well plate format, assembled by Oryx6 robot (Douglas Instruments).